Title (en)
Efficient covariance computation by table lookup

Title (de)
Effiziente Kovarianzberechnung durch Tabellennachschlag

Title (fr)
Calcul de covariance efficace par consultation de table

Publication
EP 2165421 B1 20141112 (EN)

Application
EP 08760621 A 20080605

Priority
• EP 2008057047 W 20080605
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Abstract (en)
[origin: WO2008151983A1] The impairment processor described herein uses a look-up table operation to reduce the computational complexity associated with determining an impairment correlation between first and second sample streams for an interference rejection receiver. One exemplary impairment processor iteratively computes multiple partial impairment correlations based on values selected from look-up table(s), and combines the partial impairment correlations to obtain a final impairment correlation between the first and second sample streams. During each iteration, the impairment processor computes a pair of delay offsets corresponding to the respective processing and path delays of the first and second sample streams, computes an index value as a function of a difference between the pair of delay offsets, selects a pre-computed value from the look-up table based on the index value, determines a pulse correlation estimate based on the selected pre-computed value, and determines the partial impairment correlation for that iteration based on the pulse correlation estimate.

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